I. AMENDMENT

In the Claims:

Please amend the claims as set forth in the following listing of claims, which will replace all prior versions and listings of claims in the application.

1.-11. (Canceled)

12. (Original) A method for screening and identifying small molecule modulators of endothelial nitric oxide synthase proteins comprising:

a) providing a pterin-free endothelial nitric oxide synthase structure;

b) screening the small molecule modulators for their ability to bind to a pterin-binding site of the endothelial nitric oxide synthase ; and

c) performing assays to determine the ability of the small molecule modulators to modulate the activity of endothelial nitric oxide synthase.

13. (Original) The method of claim 12, wherein the small molecule modulator inhibits endothelial nitric oxide synthase.

14. (Original) The method of claim 12, wherein the small molecule modulator activates endothelial nitric oxide synthase.

15. (Original) The method of claim 12, wherein the endothelial nitric oxide synthase protein expressed is a variant endothelial nitric oxide synthase protein.

16. (Original) The method of claim 12, wherein the pterin is tetrahydrobiopterin.

17. (Original) The method of claim 16, wherein the tetrahydobiopterin is (1'R,2'S,6R)-5,6,7,8-tetrahydrobiopterin.

18. (Original) The method of claim 12, wherein the small molecule modulators are molecules and chemical-fragments from chemical-fragment libraries.

19. (Original) The method of claim 12, wherein the screening is performed by computerized methods.

20. (Original) The method of claim 12, wherein the assays are performed *in vitro* or *in vivo*.

21. (Original) A method for identifying drugs against diseased states in which nitric oxide signaling is defective or insufficient comprising:

a) providing a tetrahydrobiopterin-free endothelial nitric oxide synthase structure;

b) screening the drugs for their ability to bind the tetrahydrobiopterin binding site; and

c) performing assays to determine the ability of the drugs to activate the endothelial nitric oxide synthase.

22. (Original) The method of claim 21, wherein the diseased states include impaired neurotransmission; impaired insulin release; impaired penile erection; impaired vasorelaxation; and impaired oxygen detection.

23.-27. (Canceled)